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Control Performance Analytics

Efficient plant optimization with automated control loop analysis

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Industrial process applications are becoming more and more complex, while production management goals for process safety, flexibility, and product quality are growing ever-more ambitious. To successfully manage this situation, additional transparency is required to detect possible areas for optimization and process fine-tuning.

The challenge

In the process industry, control performance is an important factor in reaching production targets. The single control loop is the initial core for each process application. Studies have shown that approximately half of all control loops are not well tuned. Whether this is due to non-optimum parameters, predominantly manual operation, oscillating controlled systems or mechanical problems with the control valves.

In addition, average process engineer in a typical large-scale process plant is in charge of hundreds of control loops. The evaluation of control performance across different process states in correlation with alarms requires a lot of time and expertise. Detecting of possible areas for optimization and tuning of control loops is not a one-time job, due to continuous process changes and wear and tear on equipment.



The solution

Control Performance Analytics add a new layer of transparency to your process data to support an efficient optimization process. Transparency is generated through:

- Automatic state detection and KPI calculation for different control states
- Identification of static and sliding friction in servo-valves for optimized maintenance.
- Hierarchical plant overview, from management view to single control details
- basis, which supports long-term process optimization and fine-tuning – with help from generated optimization suggestions
- Additional expert reports for critical control loops

Control Performance Analytics are fully automated to provide reliable results on a regular basis. Analytics results are provided via a secure Web portal. This ensures an effective collaboration of all levels – from the plant manager to the process operator. Long-term availability of data will ensure measurable optimization results at your plant.

Your benefits at a glance

- Advanced transparency thanks to a KPI-based control performance overview
- Identification of optimization potential
- Process transparency
- Improved plant asset performance as a result of correlating process data with possible asset problems, like static friction
- Comparable KPIs with automatic state detection

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